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Effect of supplementation of water vapor to the environmental characteristics of the combustion of propane-air mixture

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Abstract

© Published under licence by IOP Publishing Ltd. To improve the efficiency of combustion of fuel gas and air can be used additive steam. The article presents the results of an experimental study of the influence of water vapor on the combustion of propane-butane mixture with air. Combustion mixture produced in a modified Bunsen burner. Studies carried change of steam temperature of 180 to 260 degrees Celsius, and the change of the specific volume steam in the composition of the fuel mixture. Influence steam on combustion was estimated by the change of temperature of heating the quartz tube. It has been established that the increase of the steam temperature and increasing the specific volume of the heated vapor in the composition of the gaseous fuel increases the temperature of combustion.

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